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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,408	09/23/2003	Matthias Boltze	008388-09	1075

25570 7590 03/13/2006

ROBERTS, MLOTKOWSKI & HOBBS

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MCLEAN, VA 22102-8064

EXAMINER

NECKEL, ALEXA DOROSHENK

ART UNIT

PAPER NUMBER

1764

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/667,408

Applicant(s)

BOLTZE ET AL.

Examiner

Alexa D. Neckel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 10, 2006 has been entered.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on October 31, 2002. It is noted, however, that applicant has not filed a **certified** copy of the German application as required by 35 U.S.C. 119(b).

While a copy of the German application has been filed, there is not indication on the application itself that it is certified. Any such certification should be made by the foreign intellectual property authority in which the foreign application was filed and show the date of the application and of the filing of the specification and other papers. It is noted that a front or cover page to the German application appears to be missing and may contain the necessary information to verify that it is certified.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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4. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koehne et al. (WO 2000/06948) in view of Evers et al. (DE 4,205,212).

Regarding claims 1-6, Koehne et al. discloses:

a fuel cell system with a reformer (P17/L1 1-P23/L20);

a mixture formation means (Fig. 8 and 9a-9c) comprising:

- a fuel feed means (1);
- an air feed means (2);
- a mixture formation area (4);
- a fuel heating means (P16/L10-18);

wherein the mixture formation area (4) is supplied with air (2) and is positioned downstream of the fuel heating (since it is disclosed as "preheating"; P 16/L10-18) and includes a swirl chamber (4) into which a nozzle (7) connected to the fuel injection means discharges (Fig. 8 and 9a-9c);

wherein the fuel heating means is positioned upstream of the fuel feed means for preheating the fuel before injection to the mixture formation area (P 16/L10-18); and

wherein air feed means (2) includes an air heater (8).

Koehne et al. does not disclose said fuel feed means comprising a pressure impulse injection means including a changeover valve and connected to the fuel nozzle.

Evers et al. teaches a fuel feed means wherein the fuel is supplied using a pressure impulse injection means including a changeover valve and connected to the fuel nozzle (abstract). Said means allows for more accurate fuel metering so that optimal operation of the combustion engine can be achieved (C 1/L 45-49).

It would have been obvious to one having ordinary skill in the art at the time of the invention to include the pressure impulse injection means including a changeover valve and connected to the fuel nozzle, as taught by Evers et al., to the mixture formation means of Koehne et al., for the purpose of improving operation by allowing for more accurate fuel metering to eventually feed to the combustion engine (18).

Regarding limitations recited in claims 1-6 which are directed to a manner of operating disclosed system, neither the manner of operating a disclosed device nor material or article worked upon further limit an apparatus claim. Said limitations do not differentiate apparatus claims from prior art. See MPEP j 21 14 and 21 15. Further, process limitations do not have patentable weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states "Expressions relating the apparatus to contents thereof and to an intended operation are of no significance in determining patentability of the apparatus claim."

Response to Arguments

5. Applicant's arguments have been considered but are not found persuasive.

Applicant argues that Köhne et al.'s statement that fuel preheating is possible is nominal and does not give a description of to what extent this preheating should place.

Even though the fuel preheating statement of Köhne et al. is not an extensive description of the particulars of the preheating, it is well within the skill of the art to what preheating fuel would conventionally entail. In the most basic sense, fuel would be fed to some form of heating means and then the heated fuel would be fed into the device in

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which Köhne et al. discloses a preheated fuel may be fed. Additionally, Köhne et al.'s statement cannot be dismissed merely because applicant deems it "nominal".

The newly added language directed toward the temperature of the system is directed to a manner of operating disclosed system, neither the manner of operating a disclosed device nor material or article worked upon further limit an apparatus claim. Said limitations do not differentiate apparatus claims from prior art. See MPEP j 21 14 and 21 15. Further, process limitations do not have patentable weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states "Expressions relating the apparatus to contents thereof and to an intended operation are of no significance in determining patentability of the apparatus claim."

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, both Evers et al. and Köhne et al. are providing a fuel feed to a combustion engine. Evers et al. also provides motivation to use their fuel feeding means for more accurate fuel metering so that optimal operation of the combustion engine.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexa D. Neckel whose telephone number is 571-272-1446. The examiner can normally be reached on Monday - Thursday from 9:00 AM - 7:30 PM.

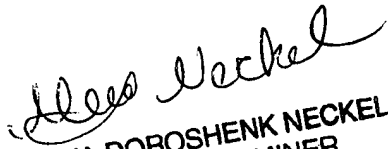
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alexa D. Neckel
Primary Examiner
Art Unit 1764

March 8, 2006


ALEXA DOROSHENK NECKEL
PRIMARY EXAMINER